

With respect to claim 1, neither Kobayashi nor Shimada disclose a liquid crystal panel substrate including, "a silicon nitride film formed as an insulating interlayer between said reflecting electrodes and a metal shielding layer above the switching element thereunder having moisture resistance," as recited in claim 1.

Instead, Kobayashi discloses a capacitance electrode 20, a data line 8 or drain electrode 23 as relied on by the Office Action. Additionally, Shimada does not make up for this deficiency. Applicant has found no indication in the applied art of the metal shielding layer, as recited in independent claim 1.

With respect to claim 3, neither Matsunaga nor Kahn disclose a liquid crystal panel substrate including, "a passivation film having a laminate structure comprising a silicon oxide film and a silicon nitride film on said silicon oxide film, the passivation film being formed at least on a side of edge sections of the at least insulating layers," as recited in claim 3.

The Office Action admits that Matsunaga does not disclose a pixel region having a matrix of reflecting electrodes, and a passivation film having a laminate structure. However, the Office Action asserts that Kahn makes up for this deficiency. Applicant respectfully disagrees with this position.

Kahn discloses a semiconductor substrate 40 covered by a thin silicon dioxide dielectric insulating layer 50. An additional oxide layer 53 covers the first oxide layer. A capacitor structure 64, i.e., a metal layer, is positioned on the oxide layer 53 and covered by insulating oxide layer 68. Thus, Applicant has found no indication in the applied art of the passivation film being formed at least on a side of edge sections of the at least insulating layers, as recited in independent claim 3.

With respect to claim 4, neither Kobayashi nor Matsunaga disclose a liquid crystal panel substrate including, "a second passivation film comprising a silicon nitride film formed at least on a side of edge sections of said periphery region," as recited in independent claim 4.

The Office Action admits that Kobayashi does not disclose a second passivation film comprising silicon nitride film formed on the periphery region. However, the Office Action asserts that Matsunaga makes up for this deficiency. Matsunaga discloses a passivation film PSV1 is formed to enclose the entirety of the matrix portion AR and is removed at its peripheral portion to expose the external connection terminals DTM and GTM to the outside. Thus, Applicant has found no indication in the applied art of the second passivation film comprising a silicon nitride film formed at least on a side of edge sections of said periphery region, as recited in independent claim 4.

With respect to claim 10, none of the applied art discloses a liquid crystal panel substrate including, "a passivation film formed by a silicon nitride film having moisture resistance and formed on a scribed region of said semiconductor substrate," as recited in independent claim 10.

As discussed above, Matsunaga discloses a passivation film PSV1 that terminates before the edge of the substrate SUB1. Additionally, Matsunaga and Kahn do not disclose that the passivation film is formed on a scribed region of the semiconductor substrate. Thus, Applicant has found no indication in the applied art of the passivation film formed by a silicon nitride film having moisture resistance and formed on a scribed region of said semiconductor substrate, as recited in independent claim 10.

For the same reasons as discussed above, Applicant respectfully asserts that new claim 14 is allowable.

Accordingly, Applicant respectfully asserts that the rejections under 35 U.S.C. §103 should be withdrawn because the applied art, whether taken singly or combined, do not teach or suggest each feature of independent claims 1, 3, 4 and 10. MPEP §2143.03 instructs that "[t]o establish *prima facie* obviousness of a claimed invention, all the claimed limitations

must be taught or suggested by the prior art. *In re Royka*, 409 F.2d 981, 180 USPQ 580 (CCPA 1974)."

For at least these reasons, it is respectfully submitted that independent claims 1, 3, 4, 10 and 14 are patentable over the applied art. The remainder of the claims that depend from independent claims 1, 3, 4, 10 and 14 are likewise patentable over the applied art for at least the reasons discussed above, as well as for the additional features they recite.

**II. CONCLUSION**

For at least these reasons, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-15 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact Applicant's undersigned representative at the telephone number set forth below.

Respectfully submitted,



James A. Oliff  
Registration No. 27,075

Jeffery M. Lillywhite  
Registration No. P-53,220

JAO:JMLvgp

Attachment:  
Appendix

Date: February 6, 2003

**OLIFF & BERRIDGE, PLC**  
**P.O. Box 19928**  
**Alexandria, Virginia 22320**  
**Telephone: (703) 836-6400**

<b>DEPOSIT ACCOUNT USE AUTHORIZATION</b> Please grant any extension necessary for entry; Charge any fee due to our Deposit Account No. 15-0461
--

## APPENDIX

## Changes to Claims:

Claims 14 and 15 are added.

The following is a marked-up version of the amended claim(s):

1. (Twice Amended) A liquid crystal panel substrate, comprising:
  - reflecting electrodes formed on a substrate;
  - a switching element formed corresponding to each of the reflecting electrodes;
  - a passivation film formed on said reflecting electrodes comprising a silicon oxide film; and
  - a silicon nitride film formed as an insulating interlayer between said reflecting electrodes and a metal shielding layer above the switching element thereunder having moisture resistance.
3. (Amended) A liquid crystal panel substrate comprising:
  - a pixel region having a matrix of reflecting electrodes formed on a substrate and a switching element formed corresponding to each of said reflecting electrodes, a periphery region of said pixel region on the substrate having a metal layer and an at least insulating interlayer interlayers; and
  - a passivation film having a laminate structure comprising a silicon oxide film and a silicon nitride film on said silicon oxide film, the passivation film being formed at least on a side of edge sections of the metal layer and the at least insulating interlayer interlayers.
4. (Amended) A liquid crystal panel substrate comprising:
  - a pixel region having a matrix of reflecting electrodes formed on a substrate and a transistor formed corresponding to each of the reflecting electrodes;
  - a peripheral circuit arranged in a periphery region of said pixel region on the substrate for supplying signals to said transistors in said pixel region;

a first passivation film comprising a silicon oxide film formed on said reflecting electrodes in said pixel region; and

a second passivation film comprising a silicon nitride film formed at least on a side of edge sections of said periphery region.

9. (Amended) A liquid crystal panel substrate according to claim 3, said edge section of ~~said metal layer and the insulating interlayer interlayers~~ being a scribed region of the substrate.